

Case Study 284: **35m Crew Boat**

SPECIFICATIONS

Waterjet:	DJ290 x3
Engine:	CAT C32 ACERT 1450 bhp @ 2300 rpm
Gearbox:	ZF 3050 2.773:1
Vessel:	35.5m L.O.A 32.7m LWL 115t (light) – 195t (laden)
Performance:	29 knots (light)



Petrobras P2 – 35m Crew and Support Vessel, Brazil

This 35m Aluminium constructed Crew Boat has been built by Mistral Marine in conjunction with MCP yachts in Brazil. It is powered by triple CAT C32 ACERT diesel engine coupled to **DOEN DJ290** waterjets. Designed for Petrobras P2 crew boat spec, this vessel provides 70 passenger capacity with 80 DWT deck cargo capacity.

For maximum service life in this arduous commercial application the **DJ290** waterjets have been specified with stainless steel pump assemblies fitted with 29" (737mm) high volume single stage axial flow impellers. These waterjets provide excellent high-speed efficiency with superior cavitation margins allowing full power application at any load condition and also at zero speed for maximum possible thrust during docking and station keeping maneuvers at sea. Doen's pre-fabricated aluminium intake duct installation combines maximum vessel integrity with simple installation.

Each **DJ290** has its own fully integrated hydraulic system providing steering and reverse control. All of the hydraulic equipment including cylinders hydraulic and associated hose connections are inboard. Mounted. The hydraulic oil reservoirs themselves are integrated with the waterjet ducting providing passive cooling and compact packaging. All hydraulic pumps are directly driven from gearbox PTO's.

Vessel propulsion control is managed using Doen's own **CAN BUS - Control** system. Configured for triple engine - twin station; the system simply combines primary control of engine throttle and gear command with the waterjet steering and reverse functions. Additionally the system provides the operator with all necessary monitoring, alarm and back-up control functions.

The second (rear facing) station has been fitted with Doen's **eDock** joystick control system. This provides a single joystick lever control that simultaneously actuates and controls waterjets and engines for precise and intuitive low speed maneuvering control